

**Disadvantaged Communities – Single-family Solar
Homes (DAC-SASH) program**

Semi-annual Progress Report

January 2021



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1. Program Summary

The Disadvantaged Communities – Single-family Solar Homes (DAC-SASH) program is overseen by the California Public Utilities Commission (CPUC, or Commission) and provides incentives for photovoltaic (PV) solar systems to qualifying low-income homeowners located in disadvantaged communities¹ within the service territories of Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric (SDG&E), (collectively, the California investor-owned utilities or IOUs). GRID Alternatives (GRID), a non-profit solar contractor, is the statewide Program Administrator (PA) for the DAC-SASH Program. DAC-SASH is largely designed based on the Single-family Affordable Solar Homes (SASH) program, which has successfully operated in California's IOUs since 2008 and is also administered statewide by GRID.

The overall goal of DAC-SASH is to provide opportunities for low-income homeowners within disadvantaged communities to overcome barriers to accessing on-site, solar PV systems to decrease electricity usage and bills without increasing monthly household expenses. Low-income families face myriad barriers to accessing solar, including financial; lack of marketing and outreach; educational and linguistic; distrust of outside entities and governments; and structural barriers like housing types and roof

¹ Disadvantaged communities for the DAC-SASH program are defined as census tracts scoring in the top 25% statewide on the CalEnviroScreen 3.0 map. Homeowners in one of 22 additional census tracts that are in the top five percent of pollution burden but that do not have an overall CalEnviroScreen score because of unreliable socioeconomic data are also eligible.
<https://oehha.ca.gov/calenviroscreen/maps-data>

condition. GRID's experience has demonstrated that dedicated, carefully designed and executed low-income solar programs can overcome these barriers and provide access to the program and also meaningful community co-benefits. GRID has designed the DAC-SASH program to build off the success of the existing SASH program, broadly addressing the primary barriers to solar access for this market segment.

GRID's program model represents a holistic approach for a very hard-to-reach population. GRID's model for DAC-SASH, based on SASH, is an integrated, turn-key model in which GRID takes responsibility for the entire project process from client outreach through contracting and system installation. The approach incorporates energy education, referrals to complementary services, and workforce development and job training into the program. This proven model ensures efficient program delivery while maximizing benefits to participating families and communities and maintaining iron-clad consumer protections for a vulnerable population.

In implementing the DAC-SASH program, GRID provides opportunities for local volunteers and job trainees to assist with installations, engage their communities, and to participate in CA energy programs. Every project includes a workforce development component, and opportunities for individuals to receive on-the-job training and access resources to assist in obtaining long-term employment. GRID partners with job training organizations (JTOs) around the state and will be focused on JTOs located in disadvantaged communities and targeting job trainees residing in disadvantaged communities for the program's workforce development initiatives.

2. Background

Assembly Bill (AB) 327 (Perea), Stats. 2013, ch. 611 directed the California Public Utilities Commission (Commission) to develop a successor to then-existing Net Energy Metering (NEM) tariffs, and also required the Commission to develop specific alternatives designed to increase adoption and growth of renewable generation in disadvantaged communities (DACs). The Commission issued Decision (D.) 18-06-027 (Decision) in June 2018, which adopted three new programs intended to promote the installation of renewable generation among residential customers in DACs: the DAC-Single-family Solar Homes (DAC-SASH) program, the DAC-Green Tariff program, and the Community Solar Green Tariff program.

The Decision describes the intent with the creation of the DAC-SASH program:² “The



DAC – Single-family Solar Homes (DAC-SASH) program, modeled after the Single-family Affordable Solar Homes (SASH) program, will provide assistance in the form of upfront financial incentives towards the installation of solar generating systems on the homes of low-income homeowners. The DAC-SASH program

will be available to low-income customers who are resident-owners of single-family homes in DACs. The incentives provided through DAC-SASH will assist low-income

² D. 18-06-027: Alternate Decision Adopting Alternatives to Promote Solar Distributed Generation in Disadvantaged Communities. 21 June 2018, p. 2-3.

customers in overcoming barriers to the installation of solar energy, such as a lack of up-front capital or credit needed to finance solar installation.”

The Commission’s experience with a non-utility Program Administrator (PA) successfully managing the SASH program over the last decade informed its decision to have the DAC-SASH program managed by a single statewide PA, selected through a competitive bidding process.³ The DAC-SASH PA Request for Proposals (RFP) was released on October 19, 2018 and the PA role subsequently awarded to GRID Alternatives (GRID) on January 4, 2019.

To qualify for DAC-SASH, homeowners must live in one of the top 25 percent most disadvantaged communities statewide using the [CalEnviroScreen](#),⁴ and be a billing customer of Pacific Gas & Electric (PG&E), Southern California Edison (SCE), or San Diego Gas & Electric (SDG&E). As of December 8, 2020, Decision 20-12-003 update program eligibility by adding tribal lands (or California Indian Country) as within the eligible geography for the program as well in addition to DACs. Homeowners must also meet [income qualifications](#) as denoted by the income guidelines of either the California Alternate Rates for Energy (CARE) program or the Family Electric Rate Assistance (FERA) program. Details for the DAC-SASH program, including eligibility and application processes, can be found in the [DAC-SASH Program Handbook](#).

Both D.18-06-027 and GRID’s DAC-SASH Administration Contract with SCE delineate reporting requirements for this semi-annual progress report,⁵ which will be published by January 30 and July 30 each year and detail the progress of the prior two calendar

³ D. 18-06-027, p. 33.

⁴ Homeowners in one of 22 additional census tracts that are in the top five percent of pollution burden but that do not have an overall CalEnviroScreen score because of unreliable socioeconomic data are also eligible. See D.18-06-027, Conclusion of Law 3.

⁵ D.18-06-027, at pg. A-4, and Task 6(D)(1-19) in SCE PO 4501098383 Statement of Work, April 2, 2019.

quarters. GRID includes sections in this report to comply with the reporting requirements, including an assessment of program barriers and ideas for design modifications.

3. Q3-Q4 2020 Update

Overview: In the second half of 2020 the DAC-SASH Program posted strong results with over 900 kW, CEC-AC of solar electric capacity interconnected for the direct benefit of over 240 low-income homeowners. This outcome is notable given the ongoing impacts of the COVID-19 pandemic on GRID's standard operations and the broad modifications GRID implemented to allow for safe installations during this unprecedented time. As of December 31, 2020, the program's total installed capacity has increased by roughly a third from the prior reporting period to a cumulative 2.54 MW (CEC-AC) capacity of installed projects, 705 PV systems have been installed using DAC-SASH incentives, 112 projects are reserved and awaiting installation or interconnection, and 85 applications have been submitted and are under review.

Activities: Ongoing activities that began in 2019 and continued throughout 2020 include increasing marketing and outreach efforts in DACs, refining the resume bank and job board, setting up an annual financial audit, and refining quality control processes to verify project qualification and document processing accuracy. In Q3 and Q4, GRID continued working to implement the [2020 DAC-SASH Marketing, Education, and Outreach \(ME&O\) Plan](#) across the state and in Q4 created its 2021 ME&O plan which will be published in February 2021 after an update to include tribal lands (added in Decision 20-12-003 on December 8, 2020). To attract DAC-SASH clients, GRID's regional offices continue to gather word-of-mouth testimonials from past program participants and are refining remote client engagement efforts.

GRID submitted a Petition for Modification (PFM) of D.18-06-027 in Q2 2020 to address several program barriers, including proposing to allow participation from CA's tribal population, as tribes were excluded from qualifying because they are not considered disadvantaged on the CalEnviroScreen map.⁶ After input from each IOU on a proposed decision, the PFM was addressed on December 8, 2020 in Decision 20-12-003. One of GRID's four PFM requests was granted, namely the inclusion of tribal lands into the program;⁷ the Decision states that such inclusion or expansion is consistent with the intent of AB 327.⁸ GRID looks forward to outreaching to tribal homes in the future and awaits the transmission of targeted data from each IOU in Q1 2021 as directed by Decision 20-12-003. Once received, we will determine how helpful the targeted data will be in identifying previously undiscovered eligible clients.

Ongoing COVID-19 Impacts: In 2020, GRID experienced a 40% reduction in production of DAC-SASH systems due to the impacts of COVID-19 on its operations. In Q3 and Q4 GRID continued to follow and adapt to all federal, state and local directives in order to execute DAC-SASH solar installations and marketing/outreach activities that are safe for its clients, community members, and installation staff. Because solar is considered

⁶ Census tracts range in population from 1,200 to 8,000 individuals per census tract, with an average of 4,000. Tribes in California range in size from five to 5,000 members, with most tribes significantly smaller than the average census tract population. None of CA's 109 federally-recognized tribes are in the CalEnviroScreen. www2.census.gov/geo/pdfs/education/CensusTracts.pdf. Census website notes 352,000 tribal members and 109 federally-recognized tribes with 78 additional petitioning for recognition. www.courts.ca.gov/3066.htm.

⁷ Decision 20-12-003 "Decision regarding petition for modification of Decision 18-06-027 and providing direction regarding marketing and outreach of the DAC-SASH"

⁸ "To bring the program more fully into alignment with the intent of the underlying statute and to facilitate alignment with SGIP ERB, we will adopt D.19-09-027's eligibility requirement relating to California Indian Country's inclusion."

an essential service by the state,⁹ GRID continued offering the benefits of the DAC-SASH program to participants in Q3 and Q4, with modifications to comply with relevant orders. GRID continued to eliminate volunteers and most group job training on-site, however in Q and Q4 some group job training began to take shape again, as offices around the state find safe, outdoor and online training spaces that allow job training cohort to meet or take place once again.

To address limits on in-person group training due to COVID-19, GRID submitted Advice Letter (AL) 15, *Proposed Modifications related to the Program's Job Training Requirements in Response to the COVID-19 Pandemic* on June 26, 2020 to request a waiver of job training requirements in up to 10% of DAC-SASH projects. The AL was approved and became effective on July 10, 2020 and is in effect for 12 months until July 10, 2021. To date the DAC-SASH program has used the waiver four times for projects that could not secure a job trainee in a timely manner.

⁹[www.energy.ca.gov/news/2020-04/state-clarifies-solar-photovoltaic-and-energy-storage-installers-essential#:~:text=The%20California%20Energy%20Commission%20\(CEC,photovoltaic%20and%20energy%20storage%20installers.](https://www.energy.ca.gov/news/2020-04/state-clarifies-solar-photovoltaic-and-energy-storage-installers-essential#:~:text=The%20California%20Energy%20Commission%20(CEC,photovoltaic%20and%20energy%20storage%20installers.)

4. Program Budget

The Commission has authorized \$10M per year to be collected for DAC-SASH, beginning on January 1, 2019, and continuing through December 31, 2030. The Decision describes that the state's IOUs will first collect DAC-SASH program funding through available greenhouse gas (GHG) allowance revenues. In the event that there are insufficient funds available from the GHG allowance revenue, then the DAC-SASH program will be funded through customer rates via public purpose funds.¹⁰ The total \$120M program will be funded by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) according to these percentages:

Table 1: Budget Allocations by Utility Territory

	PG&E	SCE	SDG&E	Total
Budget %	43.7%	46.0%	10.3%	100%
Budget through 2020 (\$ in millions)	\$8.74	\$9.20	\$2.06	\$20.00
Remaining Program Budget (2021-2030) (\$ in millions)	\$43.70	\$46.00	\$10.30	\$100.00
Total Program Budget (\$ in millions)	\$52.44	\$55.20	\$ 12.36	\$120.00

¹⁰ D. 18-06-027, p. 31.

Table 2: Budget through 2020: Allocations by Program Function

	Budget %	Budget through 2020 (\$ in millions)	Expensed Q1-Q4, 2020	Expensed prior to 2020	Remaining in 2020, Program Budget ¹¹
Incentives	85%	\$17,000,000	\$4,932,213	\$2,135,886	\$9,931,901
Administration	10%	\$2,000,000	\$1,209,364	\$755,648	\$34,987
Marketing & Outreach	4%	\$800,000	\$502,969	\$269,933	\$27,098
Evaluation	1%	\$200,000	Budget resides w/ CPUC		
Total Program Budget	100%	\$20,000,000	\$6,644,645	\$3,161,467	\$9,993,986

¹¹ Unused funds roll over to the subsequent calendar year, and any funds not allocated to specific projects or expenses by December 31, 2030, will be returned to ratepayers. D. 18-06-027, p. 31.

5. Program Growth and Project Details

Table 3 below summarizes the status of DAC-SASH applications through Q4 2020 based on the application inspection approval date.

Table 3: Applications by Status and Utility Service Territory

Application Status	Number of Applications				Total kW (CEC-AC)	Total Incentives (\$ millions)
	PG&E	SCE	SDG&E	Totals		
STEP 1: Applications under review	36	47	2	85	314.5	\$0.94
STEP 2: Confirmed Applications/Reservations	61	49	2	112	441.1	\$1.32
STEP 3: Installed	458	230	17	705	2,541.1	\$7.62
Total	555	326	21	902	3,296.7	\$9.89

Data pulled 1/15/21. *Step 1 system sizing (kW) and incentives (\$) are estimates based on an average system size of 3.7kW CEC-AC and incentive level of \$3/W. Designs are not completed until the Applicant is confirmed to meet all program requirements, but typically >90% of projects in Step 1 will move forward to Reserved status.

Chart 1: Completed Projects by Quarter

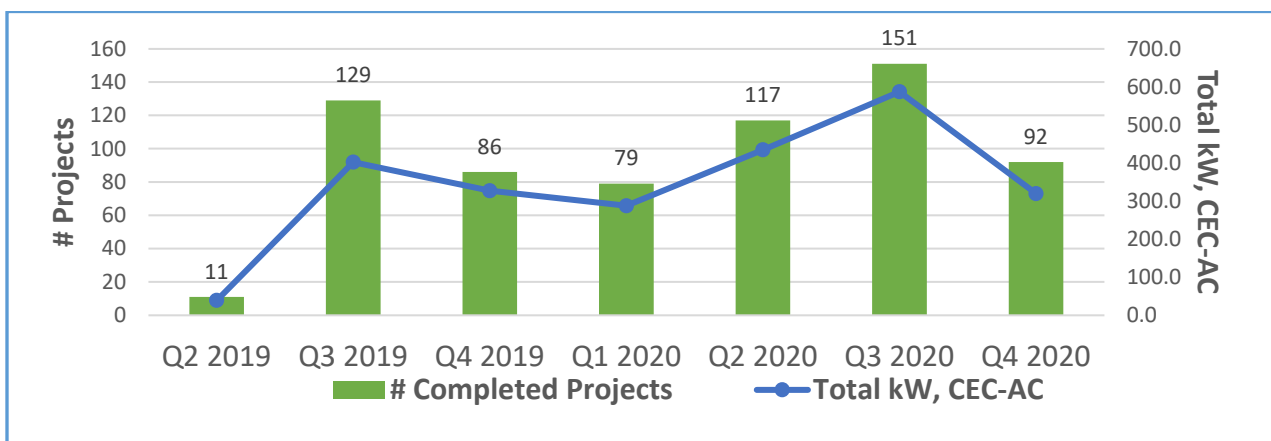
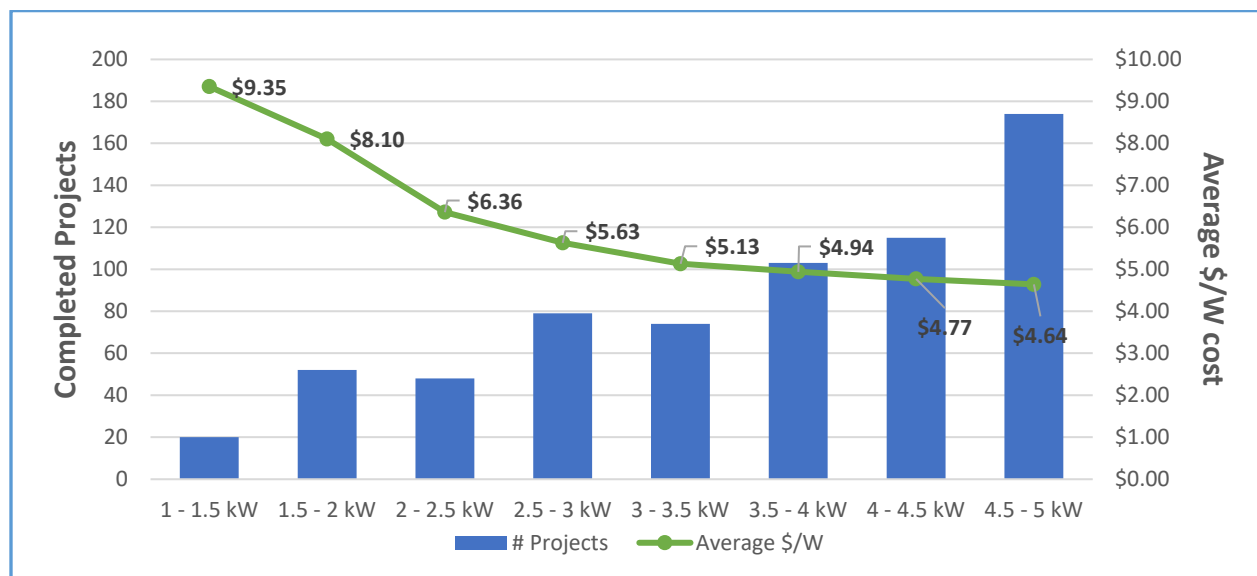


Chart 1 above illustrates the program's progress in 2020, with over 240 projects completed and interconnected in the second half of the year. These projects represent over 900kW, CEC-AC in installed capacity and have an expected annual output of almost 1.5 million kilowatt hours.

Chart 2 below indicates that 70% of all installed DAC-SASH PV-systems are 3kW (CEC-AC) or larger, with an average DAC-SASH installed project system size of 3.7kW (CEC-AC) and an average expected annual kWh output that is over 5,300 kWh. Where the system size is not constrained by roof space, DAC-SASH system sizing is based upon the client's annual usage (kWh) minus the energy efficiency savings the client may realize by adopting basic energy efficiency measures, and is capped at 5kW (CEC-AC).

Chart 2: Completed Projects by System Size and \$/Watt



6. Incentives and Project Financing

The DAC-SASH program offers one, non-declining incentive level of \$3/W (CEC-AC) for all projects. GRID's average cost to install DAC-SASH systems through 2020 was \$5.14 per Watt (CEC-AC) and varied by system size as demonstrated in Chart 2 above. This average system cost does not include all of the marketing and outreach expenses required to reach the program's target audiences and educate them about program benefits, nor does it include all of GRID's overhead and the expense to provide no-cost job training and workforce development and education. The cost for DAC-SASH installations may be higher than a general market installation because GRID brings teams of job training students and volunteers to assist with the installation, creating a teaching opportunity and a classroom on the roof for solar job trainees.

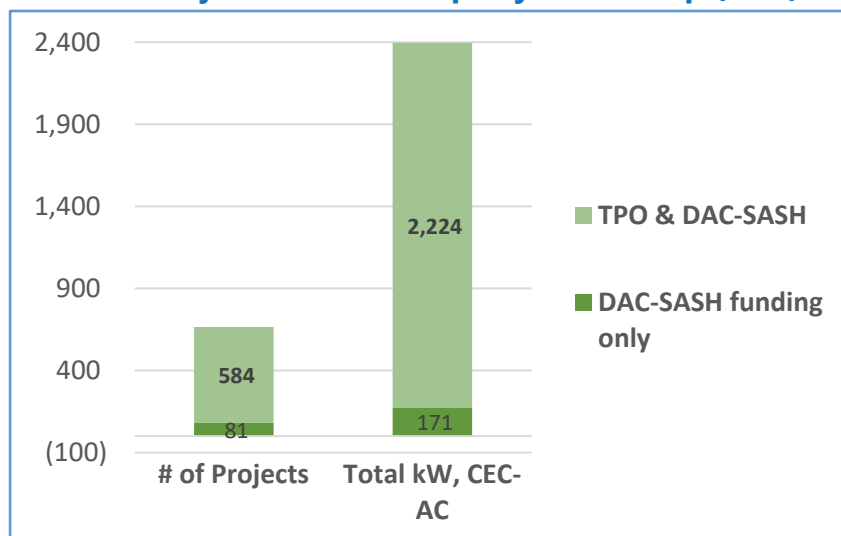
Because the incentive of \$3/W, CEC-AC covers only ~60% of the average system cost of \$5.14/W, CEC-AC, GRID must overcome the financing gap obstacle for families by contributing the organization's own non-profit fundraising dollars or additional resources toward covering the gap, which allows more families to go solar with the DAC-SASH Program than otherwise would have been able to do so.



GRID's contributions toward covering these financing gaps include general philanthropy, in-kind equipment donations, proceeds from a third-party ownership (TPO) model, and corporate sponsorships. GRID's long-standing partnerships with major equipment manufacturers including Enphase Energy and SMA Solar help cover

many DAC-SASH clients' gap funding requirements, and GRID expects to utilize philanthropic and in-kind contributions from donors and sponsorships to augment gap financing efforts in 2020 and beyond. Given a depressed economy in many disadvantaged communities, and the inability for most households to assume more debt, gap financing remains an obstacle for most low-income families to participate in the DAC-SASH Program.

Chart 3: Projects with Third-party Ownership (TPO) Funding



Through its “families-first” TPO model, GRID is able to leverage the Federal Investment Tax Credit (ITC) to help finance DAC-SASH projects, while providing additional benefits to participating families, including a performance

guarantee, system monitoring, and 25-year warranty coverage. With Resolution E-5030 (September 12, 2019), the Commission approved GRID’s TPO model that was previously outlined and approved for the SASH program in Resolutions E-4719 (June 25, 2015) and E-4829 (March 2, 2017). The primary partner for GRID’s TPO model is currently Sunrun. As seen in Chart 3 above, of the 665 total DAC-SASH projects completed to date, almost 90% are third-party owned.¹²

¹² GRID projects that cannot leverage the TPO model are due to the system size being too small to meet the TPO provider’s requirements, deed or land ownership documentation that does not meet the TPO provider’s requirements (such as projects on tribal lands), and/or a project funder/partner/city/client that is unable or unwilling to approve a TPO ownership structure.

7. Marketing and Outreach



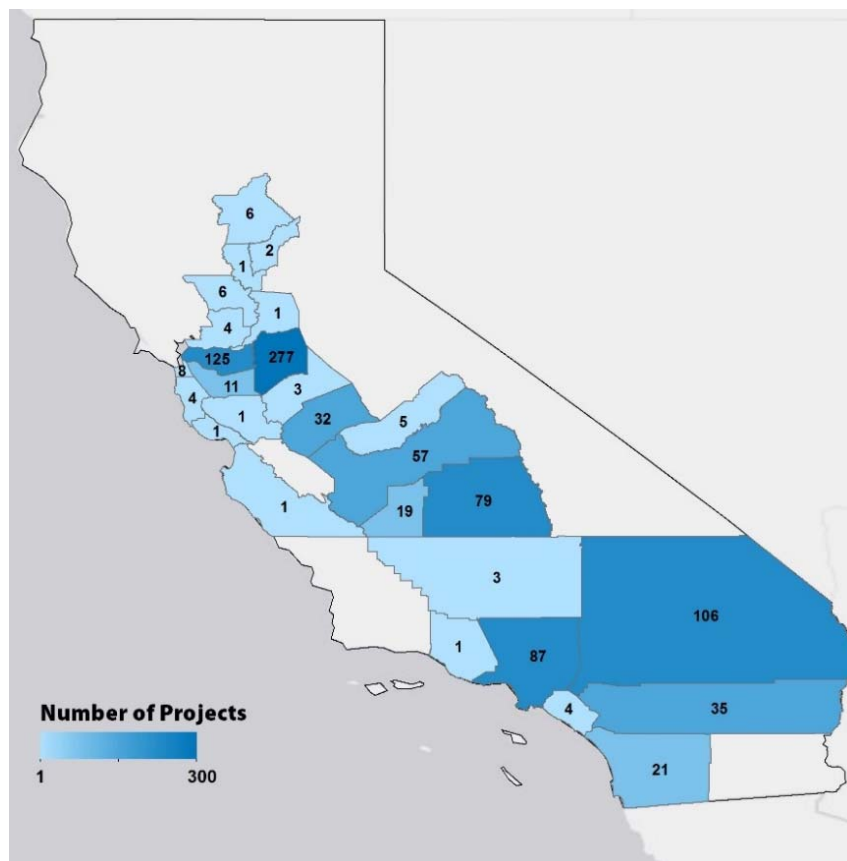
The 2020 Marketing, Education and Outreach (ME&O) plan for the DAC-SASH program can be accessed on GRID's website¹³ and provides details on planned ME&O activities, key performance indicators, the program's ME&O budget, and includes sample marketing collateral that GRID developed for the program. As part of the reporting requirements for the program, GRID is assessing progress toward

achievement of its ME&O KPIs and will submit an updated ME&O plan each calendar year. GRID provides a simplified overview of its marketing strategies in its semi-annual reports, summarized below.

GRID Alternatives currently has eight California regional offices, located in Oakland (PG&E), Willits (PG&E), Los Angeles (SCE), San Diego (SDG&E), Fresno (SCE/PG&E), Riverside (SCE), Chico (PG&E), and Sacramento (PG&E). Map 1 below shows the location of all pending or completed DAC-SASH applications through Q4 2020. It also illustrates that GRID qualified DAC-SASH applicants over a wide range of CalEnviroScreen DACs in IOU territory in 2019 and 2020.

¹³https://gridalternatives.org/sites/default/files/DAC%20SASH%20MEO%20Plan%202020_Final_12.20.19.pdf

Map 1: Location of all DAC-SASH applications and installations



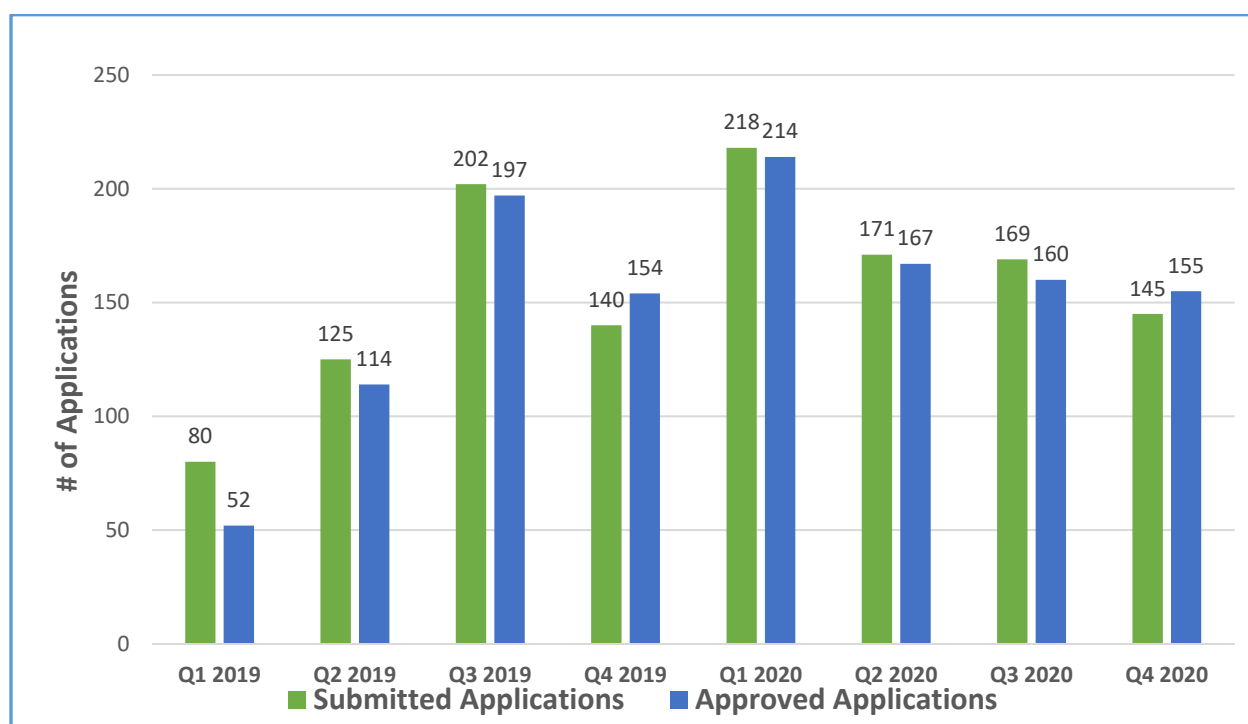
It is important to note that much of the IOU territory that would otherwise be eligible for the program is not considered a DAC; the percentage of each IOU territory that is also in a DAC is fairly low, with 5% in SDG&E, 15% in PG&E, and 30% in SCE territory under the current DAC definition.¹⁴

In Appendix A, a table lists the number of DAC-SASH applicants in each DAC census tract (not depicted in map above due to the small size of each tract).

¹⁴ SDG&E: Total Census Tracts in Territory = 703; Census Tracts in CES DACS = 37; CES DACs as % of territory = 5.3%; PG&E: Total Census Tracts in Territory = 2812; Census Tracts in CES DACS = 427; CES DACs as % of territory = 15.2%; SCE Total Census Tracts in Territory = 3059; Census Tracts in CES DACS = 887; CES DACs as % of territory = 29%. This considers all census tracts that are both entirely included in an IOU territory and that intersect it or are partially included. Data obtained from: www.census.gov/cgi-bin/geo/shapefiles/index.php; and www2.energy.ca.gov/maps/serviceareas/Electric_Utility_Service_Areas.html.

Chart 4 below, shows that GRID processed or approved 315 applications from eligible DAC -SASH clients in the second half of 2020, after an initial drop-off in Q2 2020. Of these applications, 8 were in SDG&E's utility territory, 171 in PG&E territory, and 136 in SCE territory. These results continue to highlight the barriers in identifying qualifying homes in SDG&E's territory, as detailed in Section 11, Barriers to Participation.

Chart 4: Applications by Quarter



GRID's marketing and outreach approach for the DAC-SASH program is based on the success of its work administering the SASH program and other low-income solar programs and combines a recognized brand, data-driven targeting, community and institutional partnerships, and experience-based and flexible marketing and outreach activities. Experience with income-qualifying single-family programs has shown GRID that consistent advocacy and assistance throughout the entire outreach process - and the lifetime of the solar system - is key to ensuring that language, physical ability, age

and education level are not barriers to participation and that participants can make informed decisions and receive the greatest possible benefit from the solar system. In communities often targeted by predatory practices and scams, showing investment in long-term household and community benefit is a crucial component of the program. To this end, GRID combines direct, in-community, in-language outreach and education with community and local government partnerships to ensure program information reaches eligible households through a trusted source. In new markets and regions, development of partnerships with trusted community partners to co-market the program is GRID's primary strategy for developing trust with its target audiences.

GRID's educational messages are reinforced by a robust referrals program, local media, and easily accessible digital platforms. Once a client has been approved for participation, they receive dedicated, ongoing support from outreach and construction staff from application to installation and interconnection, including referrals to complementary state and local programs, including the Energy Savings Assistance Program (ESAP), CARE, and FERA. Following the installation, GRID provides ongoing education and engagement, system online monitoring, and access to phone support and troubleshooting to clients throughout the expected life of the solar electric system, ensuring maximum impact and long-term program benefit.

Ensuring a positive client experience and long-term investment in the community is key to continued program enrollment and impact, particularly as a significant amount of new program enrollees are due to direct referrals from satisfied participants. To collect client feedback, GRID provides a participation survey after the installation of the PV-system, as well as an annual survey to monitor impact and satisfaction over the long term. Per the reporting requirements for DAC-SASH's Semi-Annual Progress Report, GRID includes in Appendix B a summary of participant survey results.

8. Job Training and Workforce Development



Job training is central to GRID's mission and the DAC-SASH program delivery model. GRID takes a holistic approach that integrates job training opportunities into every project and creates ladders of opportunity for individuals from all backgrounds to access well-paying jobs in California's thriving solar industry. Every project is a classroom in the field for local

job seekers, many coming from the same disadvantaged communities that the program is designed to serve. Through a combination of the program's job training requirements and GRID's voluntary initiatives, the DAC-SASH program is positioned to deliver impactful workforce development outcomes in 2021 and beyond.

8.1 Job Training Requirements

Projects installed using GRID's volunteer and job trainee-based model must meet one of the five categories described below. Projects installed with the Subcontractor Partnership Program (SPP) model must include at least one paid workday opportunity for an eligible job trainee.¹⁵

¹⁵ Additional information on these programs and requirements can be found at: www.gridalternatives.org/programs/workforce-development and in the DAC-SASH Program Handbook.

1. **Team Leader¹⁶:** GRID Alternatives' Team Leader Program offers experienced volunteers more comprehensive, in-depth training to further develop their skills and increase employment opportunities in the growing solar jobs market. Team Leaders log a minimum of 40 hours on GRID Alternatives' installations, complete a suite of six certifications on technical skills, attend a leadership skills workshop, and complete two installations to sign off on skills with a GRID installation supervisor.
2. **SolarCorps Fellow:** SolarCorps opportunities at GRID Alternatives include fellowships in project management, system design, marketing and outreach, communications, job trainee and volunteer management, market development, construction, and fundraising. These are one-year paid fellowships that are based on the AmeriCorps program and are sometimes combined with additional funding from the Corporation for National and Community Service.
3. **Job Training Students (at least 3):** Some of GRID Alternatives' in-house installations are reserved for job training groups of students from job training programs. These are students from community colleges, vocational high schools, or community job training programs that generally have completed a PV-classroom component, but utilize GRID's installation as the hands-on, real world application of the skills they are learning in a classroom.
4. **Installation Basics Training (IBT) Participants (at least 3):** GRID's Installation Basics Training (IBT) program awards trainees with certificates for industry-relevant skills learned and demonstrated in GRID's unique, hands-on training environment under the supervision of our professional solar installation staff. GRID currently offers 11 Skills Certificates that cover a variety of array and electrical skills, such as conduit bending and racking installations. To earn all 11 Skills Certificates, IBTs typically need to dedicate 130-300 hours in the field (8-20 complete installations).

¹⁶ The Team Leader program was approved in D 15-01-027, as one pathway for eligible job training in GRID's volunteer and job trainee model. The subsequent development of the IBT program (described on the next page) and expansion of the internship program, make it such that GRID rarely utilizes Team Leaders in its model any longer, yet it remains an option for meeting eligibility.

5. **Design & Construction Intern:** Design and construction internships allow job seekers the opportunity to explore a solar career in a real work environment while being coached through skill development. Design and construction interns spend at least 6 weeks and up to 4 months gaining solar installation training and experience on GRID's in-house installations. Depending on their focus, interns may support with site visits, system design, or direct installation. Internships include job search support, hard and soft skills development under the instruction and supervision of experienced GRID staff, and individualized goals depending on prior experience and personal objectives.

To align with the industry standards, the categories below are relevant job task analysis categories for job trainees participating in the DAC-SASH program:

- Directly work on solar installation
 - Installing Electrical Components
 - Installing Mechanical Components
 - Completing System Installation
 - Conducting Maintenance and Troubleshooting Activities
- Project Design/Project Engineering
 - Designing Systems
- Project management/coordination

Tables 4 and 5 below highlight job trainee type, hours worked, and the number of trainees participating on DAC-SASH program installations, according to program requirements.

Table 4: Unique Participants in Job Training Programs

	SolarCorps	IBT Trainees	Job Trainees	Interns	Team Leaders	Total Internal	Sub- contractor Program (SPP)
# of unique participants	49	70	296	3	3	421	4

Table 5: Job Training Hours by Volunteer and Work Type

Type of work	Solar Corps	IBT Trainees	Job Trainees	Interns	Team Leaders	Total Internal	SPP Positions	Total
Directly Worked on Installation (hours)	6,846	2,720	4,625	80	36	14,307	48	14,355
Design/Engineering (hours)	0	0	0	0	0	0	0	0
PM/ Coordination (hours)	480	0	0	0	0	480	12	492
Total Hours	7,326	2,720	4,625	80	36	14,787	60	14,847

8.2 Workforce Development Initiatives

In addition to the program’s project-level job training requirements outlined above, GRID Alternatives has incorporated additional, “green job” training and workforce development components into the DAC-SASH Program with the following initiatives:

Integration of hands-on solar installation experience into low-income job training programs. GRID Alternatives actively partners with 18 California job training

organizations (JTOs)¹⁷ to incorporate its volunteer-based installation projects into their construction training curricula. GRID dedicates approximately 20% of its internal installations to these trainees to gain hands-on experience with real-world solar installations that have conditions and requirements comparable to what they will encounter in private industry

Paid Work and Job Placement Opportunities for Training Program Graduates:

Graduates from job training programs will have the opportunity for paid work alongside professional installers on installations with DAC-SASH subcontractors. One of the biggest challenges for “green job” training is providing sufficient job placement opportunities for job trainees, ideally resulting in local hiring. Job trainees are often competing with environment-oriented college graduates looking for a way to enter the solar industry. The job training component of GRID’s SPP Program was developed to help “level the playing field” and provide opportunities for local job trainees to enter the solar PV workforce. The installer subcontractors use the installations as an extended interview, committing to hire job trainees if they perform well and the company has open, entry-level solar PV installer positions.



Resume Bank/Job Board: GRID maintains an online Resume Bank/Job Board to promote economic development in disadvantaged communities through job training and local hiring initiatives. This platform connects job seekers and employers and was expanded to more easily match qualified trainees or job

¹⁷ Active JTO partners are those that GRID has worked directly with on a DAC-SASH installation since the program’s inception.

candidates with opportunities. The Resume Bank and Job Board provide the additional benefit of gathering critical hiring data. For example, GRID has found that frequent updates with individuals, JTOs, and contractors who use the resume bank, lead to insights about the success rate of individuals seeking full-time employment.

Local Hiring Strategies Aimed at Disadvantaged Workers: GRID aims to ensure that individuals with barriers to employment can participate in the DAC-SASH program and benefit from its workforce development initiative. Based on experience and industry best practices, GRID will work with JTO partners to emphasize the importance of including “soft skills” training - such as computer literacy, resume and interviewing skills - into its curriculum in order to enhance an individual’s employability. GRID will ensure that JTOs that work with these populations have their trainees participate in the Resume Bank/Job Board and can be easily referred to companies that are hiring through the Resume Bank/Job Board. GRID has partnered with JTOs that work with re-entry populations and at-risk young adults and has successfully connected trainees to paid job training opportunities.

The Installation Basics Training (IBT) program awards trainees with certificates



for industry-relevant skills. These skills are learned under the supervision of GRID’s professional installation staff. GRID’s IBT program provides job trainees with valuable hands-on training, support for development of a skillset requested by employers, and access to potential employment opportunities. IBT trainees earn certificates by demonstrating competency in specific skills while working on installations. GRID offers 11 Skills Certificates that cover a variety of array and electrical skills.

To earn all 11 Skills Certificates, trainees typically need to dedicate 130-300 hours in the field (8-20 complete installations). Employment opportunities for IBT trainees include on-site networking opportunities with corporate sponsors, referrals to companies hiring for installation positions in the solar industry, and access to GRID's Resume Bank.

GRID Job Trainees may apply their experience toward NABCEP certification. The North American Board of Certified Energy Practitioners (NABCEP) is widely recognized as the leading certification for solar energy professionals. An individual pursuing NABCEP's PV solar installer certification must meet the Board's minimum requirement of having led 5 PV solar installations in order to sit for the certifying exam. GRID job trainees may take the NABCEP certification test once they have led five solar installations, either directly with GRID and/or with our subcontractors as part of the SPP program.

General volunteer opportunities. GRID holds mandatory orientations that all prospective volunteers must attend, which focuses on safety at the job site and allows GRID to promote solar energy and educate volunteers on solar technologies, the importance of energy efficiency, and California's low-income solar, storage, and energy efficiency programs. Individuals who complete the volunteer orientation are then eligible to work on DAC-SASH installations and leave with better knowledge about the solar industry and the DAC-SASH Program that can motivate them to be solar advocates in their own communities.

JTOs and Job Trainees located in DACs: GRID is focused on involving JTO partners and job training participants who are located in, or reside in, DACs. Of the 18 JTO partners that GRID is actively working with now, there are 12 located in DACs. These are several of GRID's active JTO partners, for example:

- Future Build (Pittsburg): since 2017

- Fresno Workforce Connection (Fresno): since 2019
- Inland Empire Job Corps Center, (San Bernardino): since 2016

In addition, GRID estimates that 221 participants on DAC-SASH projects (all types, including volunteers) reside in a CalEnviroScreen DAC.

Data Tracking and Job Placement: Finally, GRID has developed a robust system for tracking DAC-SASH job training participants, the hours they work, and project location of this work. GRID has also begun collecting additional information on wages paid, which helps determine local hiring success. To date, GRID estimates that at least 138 DAC-SASH job training or volunteer participants have secured longer-term paid employment after working on a DAC-SASH project, based on self-reporting to GRID (this is not independently verified by GRID). Trainees will be surveyed on an annual basis to measure retention, in both the solar industry and overall workforce, as well as career growth. GRID will also survey SPP Program installers on their long-term hiring of trainees, trainee recruitment experience, and trainee quality on a semi-annual basis, as well as receive information from its JTO partner network. Feedback from trainees, employers, and JTOs will inform revisions to improve the effectiveness of the training and ensure the DAC-SASH program delivers impactful workforce development outcomes in communities throughout the IOUs and in CES DACs.

9. Coordination with Complementary Programs

GRID seeks to integrate the DAC-SASH program into the full landscape of CA programs that can benefit disadvantaged communities. These include, but are not limited to, energy efficiency programs, electric bill payment assistance programs, Electric Vehicle (EV) programs, and the Self-Generation Incentive Program (SGIP) that can increase the resiliency of low-income households.

9.1 Energy Efficiency & Energy Savings Assistance Program

Energy efficiency (EE) is an important part of the DAC-SASH program and the overall mission of GRID Alternatives. GRID believes that energy efficiency is the essential first step to implement in clients' homes before installing PV-solar. To this end, GRID conducts an energy efficiency education and training session for every DAC-SASH applicant. GRID has observed that these one-on-one, tailored education sessions can be effective in driving behavioral changes that both reduce energy consumption and increase utility cost savings at the household level.

GRID works with the Energy Savings Assistance Program (ESAP) administrators to enroll eligible homeowners into the program, and with the IOUs to streamline ESAP enrollment for DAC-SASH clients. In the future, GRID will continue to work collaboratively with the IOUs to improve data transfer and standardize information GRID receives about ESAP enrollment. All PV-systems are sized based on client usage and also consider presumed energy savings from ESAP.

Table 6: Referrals to ESAP and Enrollment Percentage

	Total Referred	Enrolled	% Enrolled
PG&E	736	260	35%
SCE	539	229	42%
SDG&E	23	5	22%
Total	1,298	494	38%

Table 6 above summarizes the number of DAC-SASH participants that have been referred to the IOUs for enrollment into the ESAP through Q4 2020 or have been successfully enrolled.¹⁸ In addition to ESAP referrals and enrollment, GRID plans to explore partnerships in the future with the IOUs and other federal, state, and local programs that provide additional efficiency services to qualified homeowners, such as California’s Weatherization Assistance Program¹⁹ and the Low-Income Weatherization Program.

9.2 CA Alternate Rates for Energy / Family Electric Rate Assistance programs

GRID also coordinates with California IOUs, the administrators of the CARE and FERA programs, to increase enrollment in these assistance programs and further increase benefits for DAC-SASH participants.

¹⁸ GRID refers all ESAP-eligible DAC-SASH applicants to the IOU program; some DAC-SASH participants may not be ESAP-eligible if they have already completed services in the program, are not income-eligible, or already have an energy efficient home built in the last 5 years.

¹⁹ www.benefits.gov/benefit/1844

Table 7: CARE/FERA Enrollment of DAC-SASH Applicants

	Total Applications	CARE Enrolled	FERA Enrolled	Total Enrolled	% Enrolled
PG&E	685	530	6	536	78%
SCE	32	25	-	25	78%
SDG&E	531	395	6	401	76%
Total	1,248	950	12	962	77%

Though all qualifying-DAC-SASH households are eligible for CARE and/or FERA, many households are unaware of the benefits and accessibility of these programs. GRID's outreach staff provides information about CARE and FERA to all DAC-SASH participants and refers all DAC-SASH participants to the IOUs for potential enrollment. At this time, 77% of our clients are enrolled in one of these assistance programs.

9.3 The Self-Generation Incentive Program (SGIP)

In late 2019, Decision 19-09-027 in the Self-Generation Incentive Program (SGIP) that provides incentives for energy storage, among other technologies, decided to allow households that qualify for DAC-SASH to also qualify for the SGIP's Equity and Resiliency budget. GRID has been working with the SGIP Program Administrators (PAs) and the Energy Division to develop a streamlined SGIP enrollment processes for DAC-SASH participants, as well as explore co-marketing between the two programs. GRID is also working with its primary TPO partner Sunrun, a new partner called [Swell](#), and its equipment procurement team, to explore integrating battery storage into its PV-model and ensuring the storage systems can be delivered at no cost and that long-

term warranty coverage and battery replacement are included. GRID initiated a pilot in Q3 to begin development of a DAC-SASH PV + storage pairing for its highest-need, resiliency clients.

9.4 Electric Vehicle and Clean Mobility programs

GRID currently administers a low-income Electric Vehicle (EV) program for the CA Air Resources Board (CARB) and another program for an Air Quality Management District. GRID ensures that DAC-SASH participants receive accurate information on and are referred to these EV programs, that can help families access another cost-saving emerging technology. Again, this program is complementary to their DAC-SASH solar installation. GRID is finetuning its internal processes to better facilitate referrals between programs and logistics coordination for DAC-SASH participants who may be purchasing an EV and/or EV charger or considering a purchase. Although to date only a handful of clients have been able to participate in both DAC-SASH and one of the EV programs, GRID expects this market to expand as CA creates pathways to make EVs and their infrastructure more affordable and accessible.

10. Subcontractors

Similar to the administration of the SASH program, GRID utilizes staff throughout its Headquarters office and staff in its CA Affiliate offices to conduct administration, marketing, outreach, and installation services under the DAC-SASH program. Many services are centralized, such as equipment procurement, project-level invoicing, and orchestration of field inspections. Other services are conducted at the regional office level, such as development of local partnerships and targeted marketing and outreach

strategies. Per the DAC-SASH Semi-Annual Progress Report requirements, GRID details the program's primary subcontractors below:

a) Field Inspections

Like the SASH program, the DAC-SASH program requires that at least one in every 12 installations are inspected for proper installation and operability by an independent third-party system inspector. GRID currently subcontracts with Indaspec, the Institute for Building Technology and Safety (IBTS), and the Center for Sustainable Energy (CSE) to conduct on-site field inspections throughout the IOU territories for the program.

b) Subcontractor Partnership Program

GRID's [Subcontractor Partnership Program \(SPP\)](#) was launched under the SASH program and is a proven model for engaging local installers as subcontractors while providing paid work opportunities for job trainees. Under the SPP, GRID subcontracts with vetted, for-profit companies to install specific DAC-SASH program PV systems, based on a reduced-cost structure and modified scope of work to match the structure of GRID's model. GRID's outreach staff oversees all client-facing interactions and contracting, while the subcontractor provides limited design and/or installation services. All SPP projects are inspected by a third-party, independent inspector for Quality Assurance (QA). The QA inspection verifies that the system was installed using industry-standard best practices and meets all of GRID's installation quality requirements. In addition, subcontractors are required to hire at least 1 paid trainee onto each of their DAC-SASH SPP projects.

c) Public Reporting

GRID subcontracts with Energy Solutions to develop and maintain DAC-SASH data on the California Distributed Generation public reporting site, [CalDGStats](#). DAC-SASH data is automatically updated each week.

11. Program Assessment and Barriers

11.1 Assessment of Program Performance

Overall, GRID is pleased with the design and implementation of the DAC-SASH program statewide so far. GRID has ramped up outreach and marketing efforts statewide and the program's core messages have been well-received by target audiences. GRID planned to focus on strong workforce development outcomes and creating an impactful program with valuable co-benefits in communities, but some of these efforts remain scaled back in Q3 and Q4, due to COVID-19. This includes program elements that have been paused, such as all volunteer opportunities, solar spring break trips for high school students, and more. GRID remains concerned about some barriers to participation being a roadblock to program success and looks forward to continuing to work with stakeholders and the Energy Division to address these in 2021 and beyond.

11.2 Barriers to Participation

Low-income households face myriad barriers to both accessing solar on their own and participating in statewide and local solar programs, including financial barriers, structural barriers, and marketing and outreach barriers. GRID's holistic, community- and customer-centric approach addresses many of these barriers using strategies that have proven to be successful in working with low-income households. For example, GRID's support can enable low-income families to overcome the financial barrier to solar access by covering the cost of the system. However, there are limitations to GRID's resources and GRID may be unable to apply gap financing to all systems, as detailed below in the Gap Financing Requirements section. In addition, there are barriers to DAC-SASH participation that are due to program eligibility requirements

and that cannot be overcome with program design elements. Below is a high-level overview of GRID's assessment of program barriers.

11.2.1 Eligibility requirement for income

The DAC-SASH program requires that households meet the definition of low-income that is based on the CARE/FERA statewide eligibility. This can be constricting and jeopardize program success. The income qualification of a single statewide income level limits participation in an area such as San Diego, which has a higher cost-of-living than many areas around the state. To illustrate, nearly 50 percent of the SDG&E households who participated in SASH²⁰ -- which uses Area Median Income to take into account the varied cost-of-living around the state -- would not meet the income requirement for DAC-SASH. The Bay Area and Los Angeles regional markets experience a similar or higher rate of disqualifications using a statewide CARE/FERA income benchmark. Few homeowners in high cost-of-living areas including San Francisco and Los Angeles qualify using a statewide CARE/FERA income limit.

11.2.2 Gap financing requirements

Gap financing is the difference between the project cost and the available DAC-SASH incentive. The financial benefit from the DAC-SASH Third-Party Ownership (TPO) arrangement that GRID expects to leverage for the majority of DAC-SASH projects will help cover some financing gaps, but roughly 20% of DAC-SASH projects cannot leverage the TPO model, and others may have a higher \$/watt cost due to additional expenses such as an electrical service upgrade, or a smaller or ground mount system. In these cases, securing additional gap financing is critical to serving target households, as low-income participants are not expected to contribute financially to their installation.

²⁰ SASH uses 80% or less of Area Median Income (AMI) to meet the low-income threshold, which is set in PU Code 2852(a)(1) and detailed in Chapter 2 (commencing with Section 50050) of Part 1 of Division 31 of the Health and Safety Code.

GRID is able to leverage gap financing through local grants, foundation support, in-kind donations, and philanthropic resources, but does not have access to the amount of gap financing required by all projects to make them feasible. As such, limitations on GRID's available gap funding is a barrier to DAC-SASH program participation.

11.2.3 Additional structural costs

Much of the older housing stock that qualifies for the DAC-SASH program requires additional structural upgrades, such as roof repair or replacement, or other property rehabilitation measures related to unpermitted structures, or outdated electrical systems throughout the home (beyond a main service panel upgrade). While GRID has developed some innovative partnerships to provide roof repair and replacements for low-income families, these resources are limited and have been place-specific. For example, GRID has partnerships with the Cities of San Francisco and Richmond to provide funding for roof repair/replacement, and has a philanthropic fund devoted to re-roofing for qualifying veterans in Los Angeles. However, the need for roof repair/replacement and other structural upgrades outpaces the supply of resources to accommodate these costs. As such, homeowners with these additional structural costs face barriers to DAC-SASH program participation as most low-income families are unable to self-finance such expenses.

11.3 Program Design Improvement

GRID worked collaboratively with stakeholders and the Energy Division to explore program changes to address these limitations in late 2019 and early 2020 via a modification of D.18-06-027. In April 2020, GRID submitted a Petition for Modification (PFM) to address some of the barriers and challenges detailed in this Section. The PFM was addressed with Decision 20-12-003 on December 8, 2020 and we look forward to learning over time if the Decision will address the extent of GRID's program design

concerns. When the first program evaluation takes place in 2021, GRID and other stakeholders will gain more insight into program participation across the state. At that time GRID may consider requesting additional changes to the program if participation has not increased significantly in SDG&E territory and high cost of living regions.

12. Conclusion

GRID appreciates the interest and involvement of stakeholders and the Commission in the design and implementation of the DAC-SASH program. GRID is cautiously optimistic that Decision 20-12-003 will help the program to reach more low-income homeowners throughout California, including on tribal lands. GRID is pleased with the program's progress in completing over 660 projects and almost 2.4MW (CEC-AC) of installed capacity, with 200 more shovel-ready projects in the pipeline at this time. This progress is despite COVID-19 barriers in most of 2020.

GRID appreciates the guidance from the state, Governors' office, and local County Health Officials in prescribing guidelines to allow for safe installations during the ongoing pandemic. Despite the challenges and adaptations required to continue work under COVID-19 conditions, the economic decline, high unemployment, and disproportionate impacts to low-income households, highlight the need for DAC-SASH to help relieve energy burden and provide job training opportunities to disadvantaged communities. GRID looks forward to bringing the benefits of DAC-SASH to households and residents of disadvantaged communities in 2021 and for years to come.

13. Appendices



Appendix A

Applications in each CalEnviroScreen Disadvantaged Community Census Tract

Project County	DAC Census Tract	# of DAC-SASH applications
Alameda	6001401500	1
Alameda	6001405401	1
Alameda	6001406201	1
Alameda	6001408800	2
Alameda	6001409400	3
Alameda	6001432400	1
Alameda	6001433200	1
Alameda	6001440301	1
Butte	6007001300	6
Contra Costa	6013302005	1
Contra Costa	6013309000	2
Contra Costa	6013310000	2
Contra Costa	6013311000	8
Contra Costa	6013313101	3
Contra Costa	6013314103	3
Contra Costa	6013314104	6
Contra Costa	6013358000	3
Contra Costa	6013364002	1
Contra Costa	6013365002	4
Contra Costa	6013366002	1
Contra Costa	6013368001	3
Contra Costa	6013375000	2
Contra Costa	6013376000	7
Contra Costa	6013377000	59
Contra Costa	6013379000	3
Contra Costa	6013380000	6
Contra Costa	6013381000	6
Contra Costa	6013382000	4
Contra Costa	6013392200	2
Fresno	6019000300	2
Fresno	6019000700	3
Fresno	6019000901	4

Fresno	6019000902	3
Fresno	6019001000	4
Fresno	6019001100	4
Fresno	6019001201	1
Fresno	6019001410	1
Fresno	6019001413	2
Fresno	6019002400	1
Fresno	6019002501	1
Fresno	6019003102	5
Fresno	6019003702	1
Fresno	6019003803	1
Fresno	6019003804	1
Fresno	6019004002	1
Fresno	6019004207	3
Fresno	6019005202	1
Fresno	6019005301	1
Fresno	6019005607	1
Fresno	6019006100	1
Fresno	6019006300	2
Fresno	6019006502	2
Fresno	6019006602	1
Fresno	6019006604	1
Fresno	6019007003	4
Fresno	6019007100	2
Fresno	6019007500	1
Fresno	6019007700	1
Fresno	6019008502	1
Fresno	6107004101	7
Kern	6029006202	2
Kern	6029006304	1
Madera	6039000502	1
Madera	6039000602	1
Madera	6039000900	2
Merced	6047000301	2
Merced	6047000304	1
Merced	6047000504	1
Merced	6047000901	1
Merced	6047000902	1

Merced	6047001401	1
Merced	6047001902	1
Merced	6047002000	7
Merced	6047002201	1
Merced	6047002202	12
Merced	6047002302	5
Monterey	6053000900	1
San Francisco	6075023200	5
San Francisco	6075023400	2
San Francisco	6075061200	1
San Joaquin	6077000100	2
San Joaquin	6077000500	1
San Joaquin	6077000801	3
San Joaquin	6077000900	1
San Joaquin	6077001000	1
San Joaquin	6077001300	2
San Joaquin	6077001400	1
San Joaquin	6077001500	3
San Joaquin	6077001600	1
San Joaquin	6077001700	4
San Joaquin	6077001900	2
San Joaquin	6077002202	1
San Joaquin	6077002300	1
San Joaquin	6077002402	1
San Joaquin	6077002503	1
San Joaquin	6077002701	1
San Joaquin	6077002800	2
San Joaquin	6077003110	1
San Joaquin	6077003308	1
San Joaquin	6077003313	2
San Joaquin	6077003403	12
San Joaquin	6077003405	1
San Joaquin	6077003407	3
San Joaquin	6077003409	2
San Joaquin	6077003500	79
San Joaquin	6077003601	2
San Joaquin	6077003700	5
San Joaquin	6077003801	44

San Joaquin	6077003802	14
San Joaquin	6077003803	5
San Joaquin	6077005106	9
San Joaquin	6077005110	3
San Joaquin	6077005114	5
San Joaquin	6077005119	21
San Joaquin	6077005122	2
San Joaquin	6077005123	3
San Joaquin	6077005126	1
San Joaquin	6077005127	15
San Joaquin	6077005129	2
San Joaquin	6077005130	2
San Joaquin	6077005133	3
San Joaquin	6077005135	6
San Joaquin	6077005206	4
San Joaquin	6077005302	1
San Joaquin	6077005305	2
San Mateo	6081611900	3
San Mateo	6081612000	1
Santa Clara	6085512602	1
Santa Cruz	6087110400	1
Solano	6095250701	1
Solano	6095251802	1
Solano	6095251901	2
Stanislaus	6099000202	1
Stanislaus	6099000302	1
Stanislaus	6099000303	1
Tulare	6107000201	1
Tulare	6107000302	2
Tulare	6107004300	1
Yolo	6087121200	1
Yolo	6113010101	3
Yolo	6113010102	1
Yolo	6113010203	1
Yuba	6101050302	1
Yuba	6115040400	2
San Diego	6073002502	2
San Diego	6073003301	1

San Diego	6073003303	1
San Diego	6073003305	3
San Diego	6073003403	2
San Diego	6073003404	2
San Diego	6073003501	1
San Diego	6073004100	1
San Diego	6073004800	1
San Diego	6073004900	6
San Diego	6073011700	1
Kings	6031000500	5
Kings	6031000800	1
Kings	6031001002	1
Kings	6031001003	11
Kings	6031001100	1
Los Angeles	6037402101	1
Los Angeles	6037402200	2
Los Angeles	6037402402	1
Los Angeles	6037402406	1
Los Angeles	6037402706	1
Los Angeles	6037402904	2
Los Angeles	6037403000	1
Los Angeles	6037404703	1
Los Angeles	6037404901	2
Los Angeles	6037404902	2
Los Angeles	6037405002	1
Los Angeles	6037408138	1
Los Angeles	6037408631	1
Los Angeles	6037433503	1
Los Angeles	6037500600	1
Los Angeles	6037502100	1
Los Angeles	6037502601	1
Los Angeles	6037502700	1
Los Angeles	6037503000	1
Los Angeles	6037503105	1
Los Angeles	6037530101	1
Los Angeles	6037530901	1
Los Angeles	6037535605	1
Los Angeles	6037536103	1

Los Angeles	6037540000	1
Los Angeles	6037540102	1
Los Angeles	6037540300	1
Los Angeles	6037540501	1
Los Angeles	6037540600	2
Los Angeles	6037540800	5
Los Angeles	6037541002	1
Los Angeles	6037541200	1
Los Angeles	6037542000	1
Los Angeles	6037542103	1
Los Angeles	6037542104	1
Los Angeles	6037542200	1
Los Angeles	6037542402	1
Los Angeles	6037542601	1
Los Angeles	6037542602	2
Los Angeles	6037542700	1
Los Angeles	6037542800	1
Los Angeles	6037543100	1
Los Angeles	6037543201	1
Los Angeles	6037543306	1
Los Angeles	6037543322	2
Los Angeles	6037543501	1
Los Angeles	6037543604	2
Los Angeles	6037543801	1
Los Angeles	6037543802	1
Los Angeles	6037543903	1
Los Angeles	6037550100	1
Los Angeles	6037552100	1
Los Angeles	6037552301	1
Los Angeles	6037552700	1
Los Angeles	6037553504	1
Los Angeles	6037553602	1
Los Angeles	6037553701	2
Los Angeles	6037553901	1
Los Angeles	6037570202	2
Los Angeles	6037570204	1
Los Angeles	6037570402	1
Los Angeles	6037570403	2

Los Angeles	6037570404	1
Los Angeles	6037572302	1
Los Angeles	6037573100	1
Los Angeles	6037575300	1
Los Angeles	6037600400	1
Los Angeles	6037601402	1
Los Angeles	6037601501	1
Los Angeles	6037602004	1
Los Angeles	6037602600	1
Los Angeles	6037603200	1
Los Angeles	6037650901	1
Orange	6059074300	1
Orange	6059089001	1
Orange	6059110302	1
Riverside	6065040102	1
Riverside	6065040303	1
Riverside	6065040607	2
Riverside	6065041409	2
Riverside	6065041412	1
Riverside	6065042007	1
Riverside	6065042404	1
Riverside	6065042409	2
Riverside	6065042507	2
Riverside	6065042510	1
Riverside	6065042513	4
Riverside	6065042514	1
Riverside	6065042518	1
Riverside	6065042519	1
Riverside	6065042521	1
Riverside	6065042620	7
Riverside	6065042624	1
Riverside	6065042706	2
Riverside	6065042901	2
Riverside	6065048800	1
Riverside	6071005600	1
San Bernardino	6071000208	1

San Bernardino	6071000403	1
San Bernardino	6071000821	1
San Bernardino	6071000826	1
San Bernardino	6071001002	2
San Bernardino	6071001101	1
San Bernardino	6071001103	2
San Bernardino	6071001104	1
San Bernardino	6071001305	1
San Bernardino	6071001307	2
San Bernardino	6071001308	2
San Bernardino	6071001310	2
San Bernardino	6071001312	1
San Bernardino	6071001400	3
San Bernardino	6071001501	5
San Bernardino	6071001504	1
San Bernardino	6071001706	2
San Bernardino	6071001707	11
San Bernardino	6071001804	1
San Bernardino	6071001806	1
San Bernardino	6071001810	2
San Bernardino	6071001812	3

San Bernardino	6071001813	2
San Bernardino	6071002105	2
San Bernardino	6071002107	1
San Bernardino	6071002110	1
San Bernardino	6071002206	1
San Bernardino	6071002301	1
San Bernardino	6071002402	1
San Bernardino	6071002502	1
San Bernardino	6071002606	1
San Bernardino	6071002704	1
San Bernardino	6071002901	1
San Bernardino	6071002902	1
San Bernardino	6071003000	1
San Bernardino	6071003200	2
San Bernardino	6071003301	1
San Bernardino	6071003503	3
San Bernardino	6071003505	1
San Bernardino	6071003509	1
San Bernardino	6071003607	2
San Bernardino	6071003803	1
San Bernardino	6071003804	2

San Bernardino	6071003900	1
San Bernardino	6071004101	1
San Bernardino	6071004603	5
San Bernardino	6071004604	1
San Bernardino	6071004900	1
San Bernardino	6071005200	2
San Bernardino	6071006100	3
San Bernardino	6071007109	1
San Bernardino	6071007110	3
San Bernardino	6071007601	1
San Bernardino	6071007603	1
San Bernardino	6071007604	3
San Bernardino	6071008001	1
San Bernardino	6071009116	1
San Bernardino	6071009117	1
San Bernardino	6071010025	3
San Bernardino	6071010802	1
Tulare	6107000900	8
Tulare	6107001003	29
Tulare	6107001004	3
Tulare	6107001011	1
Tulare	6107001302	4
Tulare	6107001601	1
Tulare	6107001602	3
Tulare	6107001701	1

Tulare	6107002202	1
Tulare	6107002800	2
Tulare	6107002901	1
Tulare	6107003200	1
Tulare	6107003400	2
Tulare	6107003700	4
Tulare	6107003901	4
Tulare	6107003902	1
Tulare	6107004103	1
Ventura	6111003201	1

Appendix B

Summary of Program Participant Survey Results

GRID sends its post-installation survey out after project construction is complete. The survey includes four questions and has space for comments or other feedback. To date there are 117 survey responses from DAC-SASH participants hailing from all parts of the state where GRID works. The vast majority of responding participants stated that they would be very likely to recommend GRID to their contacts or neighbors. The four survey questions emailed to clients are:

- **Do you understand how the system works?**
 - On a 1 to 5 scale, we received on average a 3.9
- **How to tell if the system is working?**
 - On average we received a 3.7
- **What to do if the system is not working?**
 - On average we received a 3.3
- **Do you understand your NEM bills?**
 - On average we received a 3.3

To date GRID has received no formal complaints via the post-installation survey, but GRID has received constructive criticism including comments such as those below. GRID will be working to address this feedback where possible in the future:

"Better explanation of True-up and a checklist for helping to maintain the system. And also some clarification whether or not a battery storage system would be ok to install separately. Hopefully one day this all comes in a package (solar & battery) system," *from a client in Pittsburg, California.*

"The process from the first application to installation can be very time consuming ...really wish the methodology could be shortened and more efficient," *from a client in Richmond, California.*

Otherwise, GRID received positive feedback such as the comment, "Completely satisfied and proud it was done" from a client in Visalia, California and "Just saw last power bill and yes I see the difference and I thank you for it," from a client in Ontario, California.

On a related note, in Q3, 2020 GRID created a separate complaint tracking system and will begin reporting out formal complaints when they arise in the future.